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UNITED STATES GOVERNMENT

# memorandum

S-64,023/PAG-TA

DATE: 4 March 1994

REPLY TO  
ATTN OF: PAG-TA

SUBJECT: Significant Preliminary AMP Experimental Results by the Science Applications International Corporation (SAIC) (U)

SG1J THRU: PAG [redacted]

PA [redacted]

SG1J TO: PC [redacted]

1. (S/NF) As part of this Activity's external R&D contract, SAIC has been conducting basic research into the nature of Anomalous Mental Phenomena (AMP). During FY93, three significant experimental results were obtained. Although the data is still undergoing evaluation, preliminary analysis indicate that the results are considered to be of a "breakthrough" nature in AMP research. These results could significantly enhance our capability to perform our mission.

2. (U) Entropy Experiment.

a. (S/NF) Previous research by SAIC under the contract had identified a physical variable from communications theory that could be applied to Anomalous Cognition (AC) research to identify meaningful differences among target types and explain why all targets are not equally sensed by AC capabilities. This variable, called "entropy", may be defined as a measure of the information inherent in a target. Laboratory experimental activities demonstrated a significant degree of correlation between AC success and dynamic changes in the target's entropy. This is the first time in the history of AC investigations that a physical variable has been correlated with any AC activity.

b. (S/NF) The potential "value added" of this experimental result to the STAR GATE program is two-fold. First, it should now be possible to pre-assess the information content of a given target so that taskings may be chosen which have the highest potential for successful data acquisition. This should improve the overall quality of data gathered by AC. Secondly, if the information content of a target is known, then the difference in data acquisition from that target should be directly related to the skill of a viewer. It should, therefore, be possible to develop an objective method of assessing AC skills using these experimental results.

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## 2. (U) Alpha Desynchronization.

a. (S/NF) It is an established neurological fact that a brain in "idle" generates alpha waves at approximately 10 Hz and that these waves diminish significantly whenever the brain's idle state is interrupted by an external stimuli. EEG experiments conducted by SAIC seems to have demonstrated, for the first time in AC research, that reception of an AC signal by the brain does, in fact, interrupt the alpha rhythm in the same manner as would any other external signal. This is called event-related desynchronization (ERD).

b. (S/NF) The potential "value-added" of this experimental result is the potential use of ERD to improve AC functioning analogous to the method in which biofeedback can be used to train a person to alter his physiological responses.

## 3. (U) Remote Observation Experiment.

a. (S/NF) This experiment demonstrated that changes in the electrical properties of one person's skin could be effected according to the intent of an isolated operator and indicates that AMP can be used to remotely influence biological systems.

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4. (C/NF) A complete report covering these experiments will be delivered to PAG-TA in June 1994 per contract requirements. At that time a full technical report will be developed by this Activity.

## 5. (U) PAG-TA POC is

1 Enclosure  
Preliminary Research Results  
(S/NF) 1 Cy

Chief, PAG-TA

SG1J